

Claims

[c1] 1. A patient support system for a medical imaging system, comprising:
a lateral rail structure attachable to a receptor of the medical imaging system;
and
a patient support movably coupled to the lateral rail structure via a rail guide structure.

[c2] 2. The patient support system of claim 1, wherein the lateral rail structure has a curvilinear path.

[c3] 3. The patient support system of claim 2, wherein the curvilinear path is convex.

[c4] 4. The patient support system of claim 1, wherein the rail guide structure is releasably coupled to the lateral rail structure via a releasable latch.

[c5] 5. The patient support system of claim 1, wherein the patient support is positionally securable along the lateral rail structure via a friction-based mechanism activated by a patient load applied to the patient support.

[c6] 6. The patient support system of claim 1, wherein the patient support is continuously movable and securable along the lateral rail structure.

[c7] 7. The patient support system of claim 1, wherein the patient support is a patient limb support.

[c8] 8. The patient support system of claim 1, wherein the patient support is a patient extremity support.

[c9] 9. The patient support system of claim 8, wherein the patient support is adapted to position patient extremity in a non-obstructive location relative to the receptor.

[c10] 10. The patient support system of claim 1, wherein patient support comprises a plurality of hand grips.

[c11] 11. The patient support system of claim 10, wherein the plurality of hand grips are disposed at different vertical positions.

[c12] 12. A patient support for an imaging system, comprising:
a curvilinear rail structure attachable to, and movable with, a radiographic
receptor of the imaging system; and
a limb support slidingly coupled to the curvilinear rail structure.

[c13] 13. The patient support of claim 12, wherein the curvilinear rail structure has a
convex path.

[c14] 14. The patient support of claim 12, comprising a releasable latch structure
coupling the limb support to the curvilinear rail structure.

[c15] 15. The patient support of claim 12, wherein the limb support is positionally
securable along the curvilinear rail structure via a holding mechanism activated
by weight of a patient limb supported by the limb support.

[c16] 16. The patient support of claim 12, wherein the limb support is continuously
movable and securable along the curvilinear rail structure.

[c17] 17. The patient support of claim 12, wherein the limb support is adapted to
position a patient limb in a non-obstructive location relative to the radiographic
receptor.

[c18] 18. The patient support of claim 12, wherein limb support comprises a hand
grip.

[c19] 19. The patient support of claim 12, wherein limb support comprises a wrist
support.

[c20] 20. The patient support of claim 12, wherein the limb support comprises a
plurality of lateral support members disposed at different vertical positions.

[c21] 21. A medical imaging system, comprising:
a radiographic receptor;
a rail structure coupled to the radiographic receptor; and
a patient extremity support slidingly coupled to the rail structure.

[c22] 22. The medical imaging system of claim 21, wherein the radiographic receptor
is a digital detector assembly.

[c23] 23.The medical imaging system of claim 21, wherein the radiographic receptor is coupled to a positioning system.

[c24] 24.The medical imaging system of claim 21, wherein the rail structure is coupled to an upper rear portion of the radiographic receptor.

[c25] 25.The medical imaging system of claim 21, wherein the rail structure has a curvilinear path.

[c26] 26.The medical imaging system of claim 25, wherein the curvilinear path is convex.

[c27] 27.The medical imaging system of claim 25, wherein the patient extremity support tiltingly slides along the rail structure with the curvilinear path.

[c28] 28.The medical imaging system of claim 21, comprising a releasable latch structure coupling the patient extremity support to the rail structure.

[c29] 29.The medical imaging system of claim 21, wherein the patient extremity support is frictionally securable along the rail structure via a holding mechanism activated by weight of a patient extremity supported by the patient extremity support.

[c30] 30.The medical imaging system of claim 21, wherein the patient extremity support is movable in infinitesimal increments along the rail structure.

[c31] 31.The medical imaging system of claim 21, wherein the patient extremity support is adapted to position a patient limb in a non-obstructive location relative to the radiographic receptor.

[c32] 32.A method of supporting a patient limb during image acquisition by a medical imaging system, comprising the acts of:
sliding a limb support along a rail structure coupled to, and movable with, a radiographic receptor of the medical imaging system; and
securing the limb support in a desired position along the rail structure.

[c33] 33.The method of claim 32, wherein the act of sliding the limb support along the rail structure comprises the act of sliding the limb support along a

curvilinear path.

- [c34] 34. The method of claim 33, wherein the curvilinear path is convex.
- [c35] 35. The method of claim 32, wherein the act of sliding the limb support along the rail structure comprises the act of moving the limb support in infinitesimal increments.
- [c36] 36. The method of claim 32, wherein the act of securing the limb support in the desired position comprises the act of frictionally securing the limb support.
- [c37] 37. The method of claim 36, wherein the act of frictionally securing the limb support is activated by performing the act of supporting the patient limb on the limb support.
- [c38] 38. The method of claim 32, wherein the act of securing the limb support in the desired position comprises the act of positioning a patient limb in a non-obstructive location relative to the radiographic receptor.
- [c39] 39. A method of forming a laterally adjustable limb support for a medical imaging system, comprising the acts of:
 - providing a lateral rail structure attachable to a receptor of the medical imaging system; and
 - slidably coupling a limb support to the lateral rail structure.
- [c40] 40. The method of claim 39, wherein the lateral rail structure has a curvilinear path.
- [c41] 41. The method of claim 40, wherein the curvilinear path is convex.
- [c42] 42. The method of claim 39, comprising the act of providing a vertical release mechanism to facilitate vertical release of the limb support from the lateral rail structure.
- [c43] 43. The method of claim 39, comprising the act of providing a friction-based securing mechanism to secure the limb support at a desired position along the lateral rail structure.

[c44] 44. The method of claim 43, wherein the act of providing a friction-based securement mechanism comprises the act of creating a holding force between the limb support and the receptor as a patient load is applied to the limb support.

[c45] 45. A patient support structure for a medical imaging system, comprising:
patient support means for supporting a patient extremity; and
sliding attachment means for coupling the patient support means to a receptor of the medical imaging system.

[c46] 46. The patient support structure of claim 45, wherein the sliding attachment means have a substantially linear path.

[c47] 47. The patient support structure of claim 45, wherein the sliding attachment means have a curvilinear path.

[c48] 48. The patient support structure of claim 45, comprising support releasing means for releasing the patient support means from the sliding attachment means.

[c49] 49. The patient support structure of claim 45, comprising support securing means for removably securing the patient support means to the sliding attachment means.